

In the Claims

Claims 1-2 (Canceled)

3. (Previously Presented) The prosthesis of claim 8 wherein:

- the positioner comprises a piston with outwardly directed ring flanges, which piston is displaceably arranged in a cylinder attached to the leg prosthesis; and

- the positioning means comprises a ring wall projecting inwardly from the cylinder, which wall divides the space between the ring flanges of the piston into two chambers, and a two-way valve, which in an opened position provides flow of the medium existing in the chambers between said chambers and in a closed position prevents such flow.

4. (Previously Presented) The prosthesis of claim 3 wherein the elongate element extends through a central axial channel in the piston and through a central axial passage in the resilient element and is connected, via a washer of rigid material, to that end of the resilient element, which is opposite the end which bears on the piston.

5. (Previously Presented) The prosthesis according to any of the preceding claims wherein the elongate element is made of a flexible material.

6. (Previously Presented) The prosthesis of claim 5 wherein the elongate element is made of a material selected from the group consisting of cord, wire, and a belt of a material with little extensibility.

7. (Currently Amended) A leg prosthesis having a foot pivotally connected to the leg prosthesis at a pivoting joint, said foot and leg prosthesis being relatively pivotally adjustable to facilitate walking on downwardly-angled surfaces comprising:

-means for step-less adjusting of the foot relative to the leg prosthesis such that, in an adjusted position, the foot is at a fixed angle relative to the leg prosthesis, the means for step-less adjusting comprising: [[; and]]

-a positioner slidably positionable with respect to the leg prosthesis, said positioner acting against the foot and leg prosthesis to provide the relative pivoting adjustment; and

-means for slideably positioning the positioner to a fixed position with respect to the leg prosthesis; and

-means for limiting pivoting movement of the foot relative to the leg prosthesis in the adjusted position during walking, the means for limiting pivoting movement comprising:

-a resilient element having a first end connected to the foot by an elongate element; and

-the positioner slidably positions the resilient element to a fixed position with respect to the leg prosthesis such that resilient element spring force resists relative pivoting movement of the foot and leg prosthesis.

8. (Canceled)

9. (Previously Presented) A prosthesis comprising:

- a leg element;

- a foot element pivotally joined to the leg element at a pivoting joint and having front and rear ends;

- a cylinder at least partially within the foot element secured in fixed-position relationship to the leg element;

- a position-adjustable resilient element positionable within the cylinder to a fixed position corresponding to a selected position of the foot element relative to the leg element; and

- a linkage joining the resilient element to the foot element such that downward pivoting movement of the foot element front end within a walking range compresses the resilient element and the resilient element limits said downward pivoting movement.

10. (Previously Presented) The prosthesis of claim 9 further comprising a positioner positionable within the cylinder to a selected position, the resilient element bearing against the positioner to provide position adjustment thereof.

11. (Previously Presented) The prosthesis of claim 10 wherein the positioner comprises:

-a piston positionable within the cylinder having a body and front and rear end walls joined thereto, the body, end walls and cylinder defining a piston space between the piston and cylinder;

-a cylinder wall in sealing relationship with the piston body permitting movement of the piston with respect thereto and separating the piston space into front and rear chambers; and

-a hydraulic medium controllably flowable between the front and rear chambers such that flow of the medium to the front chamber slides the piston rearward in the cylinder and flow of the medium to the rear chamber slides the piston forward in the cylinder and stoppage of medium flow positions the piston in the selected position.

12. (Previously Presented) The prosthesis of claim 11 further comprising a valve controlling the medium flow between the front and rear chambers, the valve having an open position permitting medium flow and a closed position preventing medium flow thereby positioning the piston in the selected position.

13. (Previously Presented) The prosthesis of claim 12 wherein:

- a resilient element front end bears against a piston rear end;
- the linkage is an elongate element having a first end joined to the foot element forward of the pivoting joint and a second end joined to a resilient element rear end such that the elongate element:

- transfers force to the resilient element rear end during downward movement of the foot front end thereby compressing the resilient element positioned against the piston; and

- transfers resilient element spring force to the foot element when the foot element is unloaded thereby returning the foot element to the selected position.

14. (Previously Presented) The prosthesis of claim 13 further comprising:

- a foot support portion carrying the pivoting joint and secured within the foot element, said foot support portion having a front surface forward of the pivoting joint;

- a bearing surface along the foot support portion forward of the pivoting joint structured to support the elongate element bearing thereon, said bearing surface including an elongate element attachment point on the front surface, a direction-changing portion adapted to change direction of the elongate element and direct the elongate element from the front surface toward the resilient element and a bearing portion therebetween; and

- the elongate element bears against the bearing surface between the attachment point and direction-changing portion.

15. (Previously Presented) The prosthesis of claim 14 wherein the elongate element is selected from the group consisting of a cord, a wire and a belt.

16. (Previously Presented) The prosthesis of claim 14 wherein:

- the piston defines a piston central axial passageway extending therethrough;
- the resilient element defines a central axial passageway extending therethrough aligned with the piston passageway;
- the elongate element extends within the passageways; and
- a nipple in the resilient element passageway has a first end joined to the elongate element and a second end bearing against the resilient element rear end.

17. (Previously Presented) The prosthesis of claim 16 further comprising:

- a cup-shaped support surface formed in the foot support portion proximate a cylinder front end; and
- a piston support having a cup-shaped end movably seated in the cup-shaped support surface and a flat end positioned against the piston front wall when the foot element is unloaded.

18. (Withdrawn) A method of controlling operation of a leg prosthesis having a foot element pivotally joined to a leg element at pivoting joint to facilitate walking on a downwardly-sloped surface or on a level surface in elevated-heel shoes, the method comprising the steps of:

- pivotally moving the foot element to a selected angular position relative to the leg element corresponding to the downwardly-sloped surface; and

- positioning a position-adjustable resilient element relative to the leg element, said resilient element being joined to the foot element through a force-transferring linkage such that stepping down on the foot element compresses the resilient element and foot element pivoting movement is limited to a movement range based on resilient element compressibility; whereby the position-adjustable resilient element permits a similar range of pivoting movement in all relative positions of the foot and leg elements.

19. (Withdrawn) The method of claim 18 further comprising the step of positioning a position-adjustable piston in fixed-position relationship with the leg element such that the piston positions the resilient element and the positioned piston and resilient element hold the foot element in the selected angular position relative to the leg element.

20. (Withdrawn) The method of claim 19 wherein the piston positioning step comprises displacing the piston to a fixed position within a cylinder fixed with respect to the leg element against the resilient element positioned in the cylinder.

21. (Withdrawn) The method of claim 20 wherein the piston displacing step comprises urging the foot element against a piston front end thereby displacing the piston and resilient element rearward in the cylinder and, alternatively, urging the resilient element forward in the cylinder through the linkage against a piston rear end thereby moving the piston forward in the cylinder.

22. (Withdrawn) The method of claim 21 wherein the piston, cylinder and a fixed cylinder wall sealingly positioned about the piston define front and rear chambers in controlled fluid-flow relationship, and the piston displacing step comprises flowing a hydraulic medium between the chambers such that medium flows to the rear chamber during rearward piston displacement, medium flows to the front chamber during forward piston displacement and stoppage of medium flow positions the piston in a substantially fixed position with respect to the fixed cylinder wall.

23. (Withdrawn) The method of claim 22 further comprising the step of controlling medium flow between the chambers with a valve, said valve being positionable between a first position permitting the medium flow and a second position stopping the medium flow.

24. (Withdrawn) The method of claim 23 wherein the resilient element positioning step comprises displacing the piston rearward in the cylinder thereby displacing the resilient element rearward and, alternatively, displacing the resilient element forward in the cylinder through the linkage by pivoting a foot element front end downward with respect to the leg element.

25. (Withdrawn) The method of claim 24 further comprising:

- stepping down on a foot element rear end;
- transferring force from the foot element to the resilient element through the linkage to the resilient element rear end;
- limiting resilient element forward displacement in the cylinder with the positioned piston;
- compressing the resilient element against the piston;
- limiting downward pivoting movement of the foot element front end through the linkage and resilient element to a range of movement based on resilient element compressibility;
- removing the force from the resilient element by stepping up; and
- returning the foot element to the selected angular position by unloading the resilient element and rearwardly displacing the linkage connected thereto.

26. (New) The prosthesis of claim 9 further comprising a positioner movable within the cylinder to a selected position such that the positioner provides position adjustment of the resilient element.